DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BAGLEY POND	Lake Area (ha):	13.15
Town:	WINDSOR	Maximum depth (m):	7.6
County:	Hillsborough	Mean depth (m):	3.5
River Basin:	Merrimack	Volume (m^3):	458000
Latitude:	43°05'57" N	Relative depth:	3.0
Longitude:	71°59'30" W	Shore configuration:	1.24
Elevation (ft):	1146	Areal water load (m/yr):	8.43
Shore length (m):	1600	Flushing rate (yr^{-1}):	2.40
Watershed area (ha):	208.8	P retention coeff.:	0.57
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		19 February 2002	12 July 2001
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 60%	DINOBRYON 75%
	#2	RHIZOSOLENIA 35%	CHRYSOSPHAERELLA 9%
	#3		UROGLENOPSIS 8%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			6.40
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 26%	NAUPLIUS LARVA 27%
	#2	KERATELLA 18%	KERATELLA 19%
	#3	TINTINNIDIUM-LIKE 14%	CYCLOPOID COPEPOD 17%
ROTIFERS/LITER		109	217
MICROCRUSTACEA/LITER		94	252
ZOOPLANKTON ABUNDANCE (#/L)		263	473
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			3.3
BOTTOM DISSOLVED OXYGEN (mg/L)		9.0	1.2
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		< 10
	#3		< 10

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.7
Hypolimnion volume (m^3) : 43500
Anoxic volume (m^3) : None

CHEMICAL:

Lake: BAGLEY POND
Town: WINDSOR

	19 February 2002		12 July 2001		
DEPTH (m)	2.0	5.0	2.0	5.0	7.0
pH (units)	6.2	6.1	6.4	6.1	5.7
A.N.C. (Alkalinity)	2.9	2.8	3.0	2.9	3.9
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		0.05
TOTAL KJELDAHL NITROGEN	0.10	0.20			
TOTAL PHOSPHORUS	0.012	0.011	0.009	0.012	0.014
CONDUCTIVITY (μmhos/cm)	23.4	24.5	18.4	18.8	21.4
APPARENT COLOR (cpu)	16	22	17	21	28
MAGNESIUM			0.26		
CALCIUM			1.3		
SODIUM			1.4		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	4	5	3		3
TN : TP	8	18			
CALCITE SATURATION INDEX			4.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2001

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
1	2	3	1	7	Meso.

COMMENTS:

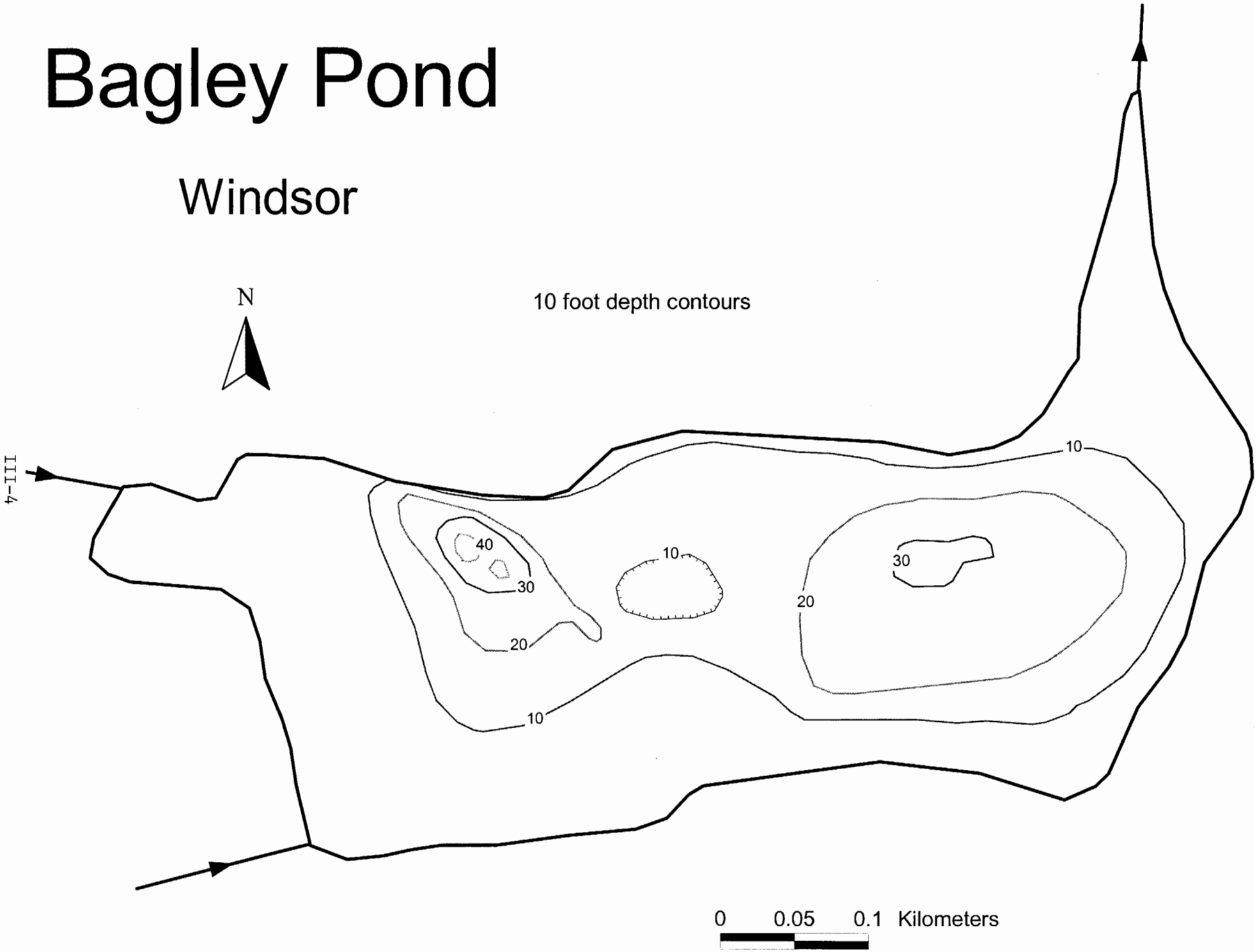
1. No public access – locked cable across the dirt road to the pond; access was arranged through Interlocken Camp.

2. Although 40 foot depths were recorded and drawn on the bathymetric map, plant growth on the sounder interfered with the fathometer readings. The 40 foot depths are suspect.

3. *Dinobryon* was a strong dominant of the summer net phytoplankton and was abundant. Total zooplankton counts were also elevated and indicate a productive pond. Plankton were also abundant during the winter.

Bagley Pond

Windsor



FIELD DATA SHEET

LAKE: BAGLEY POND
DATE: 07/12/2001

TOWN: WINDSOR
WEATHER: Partly cloudy & windy

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.5	8.2	95 %
	1.0	22.4	8.1	93 %
	2.0	22.4	8.0	93 %
	3.0	22.2	8.0	92 %
	4.0	19.6	8.3	91 %
	5.0	14.6	6.8	67 %
	6.0	10.8	1.5	14 %
	7.0	9.9	1.2	10 %
	7.5	9.7	1.2	11 %

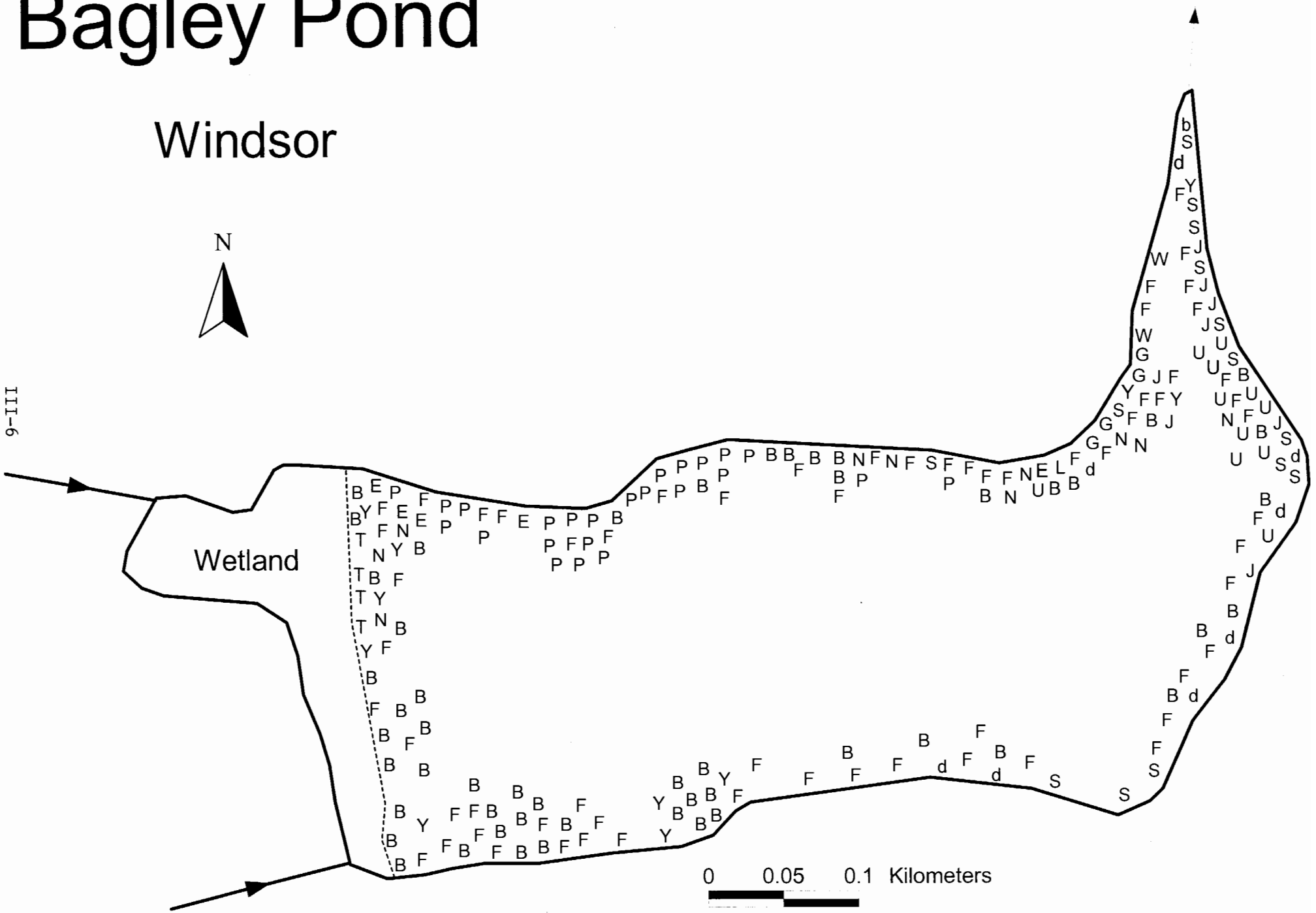
SECCHI DISK (m): 3.3
BOTTOM DEPTH (m): 7.6
TIME: 1200

COMMENTS:

*Dissolved oxygen values are in mg/L

Bagley Pond

Windsor



AQUATIC PLANT SURVEY

LAKE: BAGLEY POND TOWN: WINDSOR DATE: 07/12/2001

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Common
E	Eriocaulon septangulare	Pipewort	Sparse
F	Nymphoides cordatum	Floating heart	Scattered
B	Brasenia schreberi	Water shield	Scattered
N	Nymphaea	White water lily	Scattered
S	Sparganium	Bur reed	Sparse
U	Utricularia	Bladderwort	Common
L	Lobelia dortmanna	Water lobelia	Sparse
d	Dulichium arundinaceum	Three-way sedge	Scattered
G	Gramineae	Grass family	Sparse
Y	Nuphar	Yellow water lily	Sparse
J	Juncus	Rush	Sparse
W	Potamogeton	Pondweed	Sparse
b	Scirpus	Bulrush	Sparse
T	Typha	Cattail	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Western end of pond was a wetland with grasses, cattails and flooded dead timber.
2. Bladderwort covered the bottom along the eastern side of the pond.